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Arizona Corporation Commission

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MAR 14 2022

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE	)	DOCKET NO. L-00000B-21-0393-00197
APPLICATION OF SALT RIVER	)	
PROJECT AGRICULTURAL	)	
IMPROVEMENT AND POWER	)	
DISTRICT, IN CONFORMANCE WITH	)	
THE REQUIREMENTS OF ARIZONA	)	
REVISED STATUTES, SECTIONS 40-	)	
360, ET SEQ., FOR A CERTIFICATE OF	)	
ENVIRONMENTAL COMPATIBILITY	)	
AUTHORIZING THE EXPANSION OF	)	
THE COOLIDGE GENERATING	)	
STATION, ALL WITHIN THE CITY OF	)	
COOLIDGE, PINAL COUNTY,	)	
ARIZONA.	)	SIERRA CLUB'S BRIEF

Sierra Club, by and through undersigned counsel, hereby submits its Brief pursuant to the procedural order issued in this docket on February 28, 2022.

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## **I. INTRODUCTION**

The Power Plant and Line Siting Committee's decision to grant a Certificate of Environmental Compatibility ("CEC") for Salt River Project's proposed Coolidge Expansion Project ("CEP") is not supported by evidence and the Commission must reverse the Committee and deny the CEC. During the hearing, the Committee heard extensive evidence regarding the nine compatibility factors included under A.R.S. §40-360.06(A). Evidence presented with respect to each of these factors made clear that the CEP is incompatible with the surrounding area and that devastating environmental and health impacts will result. Further, the record conclusively demonstrates that the Applicant engaged in a rushed and deficient process, failed to reasonably consider available alternatives that would eliminate the numerous negative impacts of the project, violated its own policy when it failed to issue a request for proposals ("RFP")—the industry standard process—prior to moving forward with the CEP, failed to engage with impacted neighbors adequately, and failed to demonstrate that its Application complies with all legal requirements.

Fortunately, record evidence demonstrates that alternatives exist that better balance the interests of the public, the environment, human health, and the Applicant's needs to provide service. The CEP must be examined in the context of our times, and while similar applications made as recently as just a decade or more ago may have required approval despite their numerous and excessive environmental and health impacts because no other option existed, today there are real, affordable, safe, and reliable alternatives. The existence of real, affordable, safe, and reliable alternatives changes the analysis and demands rejection of the CEP.

## **II. ARGUMENT**

Sierra Club has identified five primary issues with the CEP that make it ineligible for a CEC. These include: 1) the overall environmental impact of the CEP; 2) location-specific environmental impacts; 3) the flawed and rushed process by which SRP selected the CEP to meet its need for peaking capacity; 4) SRP's failure to consider and rejection

1 of reasonable alternatives to the CEP; and finally, 5) that the CEC Application itself is  
2 legally deficient. Each of these issues are detailed herein.

### 3 **A. Environmental Impacts**

4 Extensive evidence was presented to the Committee regarding the harmful  
5 environmental impacts that are *certain* to result from the CEP. This includes endangering  
6 the health of nearby residents, residents of Pinal County, and more broadly, all of Arizona  
7 and portions of neighboring states due to the widespread dissemination of particulate  
8 emissions from the plant. The record also showed that added carbon emissions from the  
9 expansion will fuel global climate change at a time when reductions in emissions are  
10 severely needed. Further, the project will bring significant new noise and visual light  
11 pollution to the area. SRP's environmental witnesses offered highly questionable and  
12 unreliable testimony and admitted to forming opinions despite the lack of key information.  
13 Finally, the CEP increases water consumption in Pinal County while the County, and  
14 Arizona as a whole, are suffering a historic drought.

#### 15 **1. Health Impacts**

16 The expansion project will cause numerous public health problems that carry long-  
17 term economic consequences for Arizona and the United States. As Sierra Club witness  
18 Cara Bottorff explained, the project is projected to result in hundreds of millions of dollars  
19 in increased healthcare costs during its lifetime.<sup>1</sup> These findings are estimates from the US  
20 EPA's CO-Benefits Risk Assessment Health Impact Screening and Mapping tool. This tool  
21 is known as the "COBRA" tool and is used for health impact modeling.<sup>2</sup> As such, it models  
22 changes in human health and health-related economic impacts that correspond with  
23 changes in pollution levels.<sup>3</sup> Witness Bottorff explained that Sierra Club analyzed the CEP  
24 using the criteria pollutants and stack height used by SRP in its Air Quality Permit Revision  
25 application as inputs for the COBRA model.<sup>4</sup>

26  
27 <sup>1</sup> Bottorff Tr. Vol. VII at 1215:11-14.

<sup>2</sup> Bottorff Tr. Vol. VII at 1209:10-14.

<sup>3</sup> Bottorff Tr. Vol. VII at 1209:10-14.

28 <sup>4</sup> Bottorff Tr. Vol. VII at 1210:9-15.

1 The projected negative health impacts of the CEP, based on COBRA modeling, are  
2 staggering. Ms. Bottorff testified that “what the COBRA model tells us is that the Coolidge  
3 Expansion would lead to total health costs between \$9.5 million and \$21.5 million *in a*  
4 *single year*. The bulk of these costs, about three-quarters, or between \$7 million and \$16  
5 million, would be borne by those living in Arizona.”<sup>5</sup> The remaining quarter, or \$2.5 - \$5.5  
6 million, in annual costs would impact neighboring states.<sup>6</sup> These figures represent costs  
7 stemming from increases in mortality rates, infant mortality rates, heart attacks, and  
8 multiple respiratory illnesses that will result from the exposure to pollution from the plant.<sup>7</sup>

9 The outlook becomes even more bleak when considering that these impacts will  
10 compound over the plant’s lifetime. If the plant expansion operates for 20 years, the net  
11 present value of the health costs that it will create ranges from \$137 million to nearly \$390  
12 million.<sup>8</sup> And again, because Arizonans will be exposed to the majority of the plant’s  
13 pollution, they will be forced to bear between \$100 million and \$227 million of that total  
14 while the remainder is borne by those in neighboring states.

15 To be sure, the pollution caused by the new gas turbines alone will drive significant  
16 and unwelcome health impacts. However, when the pollution generated by these new  
17 turbines is combined with existing conditions in Pinal County, these impacts will be  
18 exacerbated. In fact, Pinal County and the area surrounding the CEP already suffer from  
19 extremely poor air quality. The project is located squarely within what the EPA describes  
20 as the “West Pinal County PM10 Serious Nonattainment area.”<sup>9</sup> This means that the EPA  
21 has determined that air quality in the area is very poor and unhealthy due to the high level  
22 of particulate emissions in the air.<sup>10</sup> The American Lung Association has also evaluated  
23 Pinal County’s air quality. In its 2021 State of the Air report, it gave Pinal County failing  
24 grades for high levels of ozone and particulate matter.<sup>11</sup> And the CEP would add a major

25 <sup>5</sup> Bottorff Tr. Vol. VII at 1211:24 – 1212:4.

26 <sup>6</sup> Bottorff Tr. Vol. VII at 1216:2-7.

27 <sup>7</sup> Ex. SC-28, Health Impact of Coolidge Expansion, COBRA Results and NPV.

28 <sup>8</sup> Bottorff Tr. Vol. VII at 1212:8-10.

<sup>9</sup> Ex. SC-20, Pinal County Air Quality Viewer.

<sup>10</sup> Bahr Tr. Vol. VII at 1198:21 – 1199:2.

<sup>11</sup> Ex. SC-21, American Lung Association Pinal County Report.

1 new source of particulate and ozone-precursor emissions to Pinal County air. Annual  
2 operation emissions from the plant would be limited to 249.5 of VOCs, 249.5 tons of  
3 carbon monoxide, 249.5 tons of nitrogen oxides, 249.5 tons of sulfur dioxide, and 69.9 tons  
4 of particulate matter.<sup>12</sup>

5 Indeed, these are more of the same particulates that already make Pinal County air  
6 so dangerous. Sierra Club witness Sandy Bahr explained that there are essentially two sizes  
7 of particulates that cause these health problems. Larger particulates, called coarse  
8 particulate matter, which are 2.5 to 10 microns in diameter contribute to asthma and lung-  
9 related respiratory diseases, particularly in children and the elderly.<sup>13</sup> The smaller of the  
10 two particulates, known as fine particulate matter, is even more dangerous. As Ms. Bahr  
11 described:

12           The fine particulate matter, which is what comes primarily from  
13 combustion, is even more of a public health threat as, unlike coarse  
14 particulates, we have trouble coughing or sneezing these smaller particles  
15 out. They get trapped in our lungs and can pass into our bloodstream.  
16 Exposure to fine particulates results in decreased lung function, more  
17 hospital visits, increased asthma and heart attacks, and increased numbers of  
18 deaths. Exposure to fine particulate matter can also contribute to emphysema  
19 and lung cancer.<sup>14</sup>

20 As such, current conditions in Pinal County mean that the addition of a new source  
21 of particulate emissions like the CEP is highly inadvisable because it will have a deadly  
22 effect on human health. The enormous health costs described above include baseline  
23 emissions from Pinal County.<sup>15</sup> In other words, they are in addition to the impacts that are  
24 already occurring due to other sources of particulate emissions.<sup>16</sup> Therefore, this project  
25

26 <sup>12</sup> Ex. SRP-1, CEC Application at B-2, Air Quality Impacts During Operation.

27 <sup>13</sup> Bahr Tr. Vol. VII at 1200:24 – 1201:5.

28 <sup>14</sup> Bahr Tr. Vol. VII at 1201:6-15.

<sup>15</sup> Bottorff Tr. Vol. VII at 1213:16-21.

<sup>16</sup> Bottorff Tr. Vol. VII at 1213:16-21.



1 alone would add hundreds of millions of dollars in health impacts to an area already  
2 plagued with air pollution problems.<sup>17</sup>

3 Importantly, nowhere in the record does SRP contest that the CEP *will cause* these  
4 numerous health problems. SRP instead chose to largely ignore the health impact and did  
5 not even prepare any health impact modeling to evaluate the CEP's health impacts.<sup>18</sup> As  
6 described in more detail below, thankfully we live in a time where there are real alternatives  
7 to the CEP that will not cause these extensive health impacts.

## 8 **2. Climate Change Impact**

9 The CEP also contributes to climate change by creating a significant new source of  
10 carbon emissions at a time when reductions are desperately needed. In this instance,  
11 building new fossil fuel generation is simply irresponsible when better, non-carbon  
12 intensive alternatives are available. Sierra Club and Western Resource Advocates each  
13 presented evidence demonstrating the importance of curbing carbon emissions now, as  
14 outlined in the UN's Intergovernmental Panel on Climate Change ("IPCC") report.<sup>19</sup> The  
15 IPCC report shows that the climate is changing even more quickly than anticipated, as  
16 evidenced by increases in extreme temperatures, drought, and flooding.<sup>20</sup>

17 This is particularly true in Arizona and the desert Southwest. As Ms. Bahr described,  
18 "Here in Arizona we are seeing firsthand the impacts of the climate crisis with more  
19 extreme heat and drought and larger wildfires according to the National Climate  
20 Assessment."<sup>21</sup> The IPCC report forecasts extreme heat events in the desert Southwest  
21 becoming increasingly common.<sup>22</sup> Western Resource Advocates witness Alex Routhier  
22 described how heat events that have historically occurred once every 10 years may begin  
23 occurring nearly every year, while more extreme events that might happen once every 50  
24 years could begin occurring nearly 40 times every 50 years – or nearly once annually as

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26 <sup>17</sup> Bottorff Tr. Vol. VII at 1215:11-14.

<sup>18</sup> Watt Tr. Vol. IV at 668:19-21.

27 <sup>19</sup> Ex. SC-23, Climate Change 2021: The Physical Science Basis: Summary for Policymakers.

<sup>20</sup> Bahr Tr. Vol. VII at 1193:23 – 1194:4.

28 <sup>21</sup> Bahr Tr. Vol. VII at 1194:5-8.

<sup>22</sup> Ex. WRA-3.



1 well.<sup>23</sup> This is an alarming trend in Arizona, because as Mr. Routhier described, “desert  
2 locations that are already susceptible to high heat will be particularly susceptible to this  
3 type of event.”<sup>24</sup> To make matters worse, Pinal County is one of the US counties at highest  
4 risk from climate change due to heat increases, reductions in crop yield, and other  
5 economic impacts.<sup>25</sup> And as Ms. Bahr summarized, “These climate impacts to our region,  
6 our state, and Pinal County are why it is essential that we move away from burning fossil  
7 fuels for electricity generation and do so as quickly as possible.”<sup>26</sup>

### 8 **3. Noise Pollution**

9 A.R.S. §40-360.06(A)(3) requires the Committee to consider noise emission levels  
10 from the CEP. Any reasonable consideration of this factor can only lead to one conclusion:  
11 that the 16 new jet engine turbines to be installed will have a material negative impact on  
12 noise emission impacting the nearby Randolph community. At the hearing, Randolph  
13 residents complained that the 12 jet engines currently in use at the CEP already cause noise  
14 problems for their community. Resident Ron Jordan described a “constant light humming”  
15 noise coming from the plant whenever the gas turbines are operating.<sup>27</sup> This noise problem  
16 can be expected to get worse after the expansion, as the number of jet engine turbines  
17 operating will more than double from 12 units currently to 28 total jet engines after  
18 completion. The noise analysis performed by SRP confirmed an increase from existing  
19 sound levels would occur as well.<sup>28</sup>

20 According to SRP’s environmental consultant Devin Petry, operating 16 new jet  
21 engine turbines within 1000 ft. of Randolph would be “barely noticeable.”<sup>29</sup> When pressed  
22 further, Mr. Petry, the witness on noise, readily admitted that he *did not know whether the*  
23 *plant had been operating any time he visited the project area.*<sup>30</sup> He further conceded that

24  
25 <sup>23</sup> Routhier Tr. Vol. VII at 949:13 – 950:6.

<sup>24</sup> Routhier Tr. Vol. VII at 950:4-6.

<sup>25</sup> Bahr Tr. Vol. VII at 1194:20-23 citing Ex. SC-25.

<sup>26</sup> Bahr Tr. Vol. VII at 1195:4-7.

<sup>27</sup> Jordan Tr. Vol. V at 908:23-25.

<sup>28</sup> Ex. SRP-1 at I-4, Noise Impacts from Proposed Project: Conclusions.

<sup>29</sup> Petry Tr. Vol. III at 556:8.

<sup>30</sup> Petry Tr. Vol. IV at 639:13-18.

1 his testimony regarding noise levels was not based on his own conclusions and that he  
2 could not verify them based on firsthand experience.<sup>31</sup> As such, testimony provided by  
3 SRP's witness relating to noise impacts is unreliable and should be given no weight. In  
4 the alternative, anyone who has ever stood outside at an airport can tell you that standing  
5 1000 ft. away from 16 firing jet engines (8 two-engine jets) will be perceptible and will  
6 result in increased and deleterious noise emission levels. Clearly, the analysis under A.R.S.  
7 §40-360.06(A)(3) favors rejecting the CEP.

#### 8 **4. Visual and Light Pollution**

9 A.R.S. §40-360.06(A)(5) requires examination and consideration of impacts on  
10 "existing scenic areas, historic sites and structures [ ] at or in the vicinity of the site" while  
11 subsection (A)(6) requires a consideration of the "total environment of the area." To this  
12 end, the Applicant presented evidence related to the visual impacts of the CEP. Meanwhile,  
13 residents of the neighboring historically Black community of Randolph complained about  
14 how the plant's lights impact them at night. Randolph resident Melvin Moore explained  
15 that, "You have to close your blind[s] ... to keep it from disturbing you."<sup>32</sup> Mr. Moore also  
16 complained that the lights interfered with his sleep.<sup>33</sup> Resident Ron Jordan further  
17 described how light pollution from the plant had destroyed his ability to view the night sky  
18 in the area.<sup>34</sup> Finally, photographs of the plant's lighting at night that were taken from Mr.  
19 Jordan's backyard were presented to the Committee.<sup>35</sup> As Mr. Jordan put it, "I look over  
20 there and it looks like the city of Mesa."<sup>36</sup>

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23  
24  
25  
26 <sup>31</sup> Petry Tr. Vol. IV at 639:19 – 640:4.

27 <sup>32</sup> Moore Tr. Vol. V at 861:21-25.

28 <sup>33</sup> Moore Tr. Vol. V at 862:1-2.

<sup>34</sup> Jordan Tr. Vol. V at 908:6-16.

<sup>35</sup> Ex. RR-2.

<sup>36</sup> Jordan Tr. Vol. V at 907:14-15.



(Ex. RR-31, Nighttime View of Coolidge Generating Station from the backyard of witness Ron Jordan.)

As with testimony regarding noise issues, SRP witnesses offered testimony on light pollution that should be disregarded. SRP's witness Petry first told the Committee that the CEP would not have increased visual impacts.<sup>37</sup> However, when pressed, Mr. Petry admitted that this conclusion *ignored* the visual impacts of the plant at night.<sup>38</sup> Mr. Petry testified that the expansion project will feature new lighting similar to the lights on the existing plant.<sup>39</sup> And he concluded that the visual impact of the expansion project – including the new plant lighting – would be compatible with the location.<sup>40</sup>

<sup>37</sup> Petry Tr. Vol. VIII at 549:7 – 550:5.

<sup>38</sup> Petry Tr. Vol. IV at 653:19-25.

<sup>39</sup> Petry Tr. Vol. IV at 647:22 – 648:4.

<sup>40</sup> Petry Tr. Vol. III at 550:3-5.

1 Yet when asked whether the plant is currently visible at night from a distance he  
2 could not answer, confessing that “I don’t know if the current plant is visible from miles  
3 away.”<sup>41</sup> In fact, Mr. Petry went on to admit that, despite testifying that the CEP will not  
4 have negative visual impacts, *he had never viewed the plant at night*.<sup>42</sup> Thus, SRP’s  
5 witness found that the project’s lighting was compatible with the surrounding area despite  
6 never once visiting or seeing the plant at night. Moreover, this finding was directly  
7 contradicted by the testimony of local residents who stated that the plant already “looks  
8 like the city of Mesa” when it is illuminated at night.<sup>43</sup> Therefore, as with SRP testimony  
9 relating to the project’s noise impact, its witnesses’ testimony regarding light pollution and  
10 visual impacts is unreliable and should be given no weight. Clearly, the analysis under  
11 A.R.S. §40-360.06(A)(5) and (6) favors rejecting the CEP.

## 12 **5. Water Consumption**

13 The analysis under A.R.S. §40-360.06(6) relating to the total environment of the  
14 area, as well as the analysis under subsection (A)(1) requiring consideration of plans of  
15 other entities for development in the vicinity of the proposed site require an analysis of the  
16 impacts of water usage at the CEP. The CEP requires the use of groundwater that is already  
17 in short supply. SRP justified this use by arguing that because the water can be supplied  
18 through the use of its existing storage credits with the Pinal County Active Management  
19 Area (“AMA”), the impact will be minimal.<sup>44</sup> SRP’s witness also rationalized that because  
20 the increase in water consumption would be less than if the site were used for agricultural  
21 purposes, the impact was acceptable.<sup>45</sup>

22 In reality, any increase in water consumption in this area is irresponsible when  
23 alternatives that use no water are available. SRP’s reliance on storage credits for water does  
24 not mean that the project will not use water drawn from the ground, it means that the water  
25 it will be pumping represents water that it previously stored— water that could otherwise be

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26 <sup>41</sup> Petry Tr. Vol. IV at 654:10-11.

27 <sup>42</sup> Petry Tr. Vol. IV at 647:9-10.

28 <sup>43</sup> Jordan Tr. Vol. V at 907:14-15.

<sup>44</sup> Petry Tr. Vol. III at 577:7-13.

<sup>45</sup> Petry Tr. Vol. III at 578:12-13.

1 saved for other uses in an area that is already suffering from groundwater depletion.<sup>46</sup> As  
2 Ms. Bahr clarified, “SRP will utilize those long term storage credits for water, but that does  
3 not change the fact that they will still be pumping right there on the property and not where  
4 the water associated with the storage credits was stored.”<sup>47</sup> To make matters worse, the  
5 Arizona Department of Water Resources (“ADWR”) is currently projecting a serious  
6 shortfall in groundwater availability relative to water demand within the Pinal AMA.<sup>48</sup> In  
7 fact, ADWR expects this deficit to exceed 8 million acre-feet after 100 years of pumping.<sup>49</sup>  
8 The shortfall is already so significant that ADWR is no longer allowing residential  
9 subdivisions that rely on groundwater to be approved in the AMA.<sup>50</sup> Yet, as SRP witness  
10 Petry admitted, the project’s consumption would be “equivalent to the water use of  
11 approximately 600 homes.”<sup>51</sup>

12 In sum, despite SRP’s argument that the expansion project’s water consumption is  
13 less than other potential uses, its water use is not insignificant, particularly within the Pinal  
14 AMA. As witness Bahr explained, a residential community with a similar water  
15 consumption need would never be permitted within the AMA due to the ongoing shortage  
16 of water in that area.<sup>52</sup> Why then, should SRP be permitted to consume the same amount  
17 of water when it does not need to? As detailed below, this water use is entirely unnecessary  
18 because the expansion project can and should be replaced by generating sources that  
19 require no water at all.

## 20 **B. Location**

21 The specific location of the CEP is another key reason the project should not go  
22 forward. The evidence showed that this location is simply an inappropriate place to site  
23 these generators. The existing plant is alarmingly close to the historic neighborhood of  
24 Randolph. It sits within 1000 ft. of this historically Black community, which is home to

25 <sup>46</sup> Bahr Tr. Vol. VII at 1201:19 – 1202:1.

26 <sup>47</sup> Bahr Tr. Vol. VII at 1202:17-21.

27 <sup>48</sup> Bahr Tr. Vol. VII at 1202:2-6.

28 <sup>49</sup> Ex. SC-26, The Myth of Safe Yield.

<sup>50</sup> Bahr Tr. Vol. VII at 1202:8-11.

<sup>51</sup> Petry Tr. Vol. III at 577:3-6.

<sup>52</sup> Bahr Tr. Vol. VII at 1202:8-11.

1 approximately 150 residents.<sup>53</sup> In fact, the plant's incredibly close proximity to these  
2 homes is why the aforementioned noise and light pollution coming from the plant are so  
3 pronounced for the residents who testified.<sup>54</sup> In addition, the Arizona Training Program –  
4 a home and care facility for disabled adults – is also located less than half of a mile away  
5 yet no SRP witness had spoken to any of the residents or their guardians.<sup>55</sup> Clearly, twenty-  
6 eight gas turbine generators do not belong within 1000 ft. of a historic neighborhood and  
7 less than a mile from a home for disabled persons.

8 Throughout the proceeding, the Randolph residents complained of little contact with  
9 SRP and the negotiations with the neighbors were rushed and literally occurred during a  
10 single break lasting less than an hour on the last day of the hearing. Now contrast this  
11 process with the thorough process that SRP underwent for the expansion of its San Tan  
12 Generating Station in the substantially more affluent community of Gilbert in 2001. Instead  
13 of rushing that project and avoiding negotiations with neighbors, sufficient time was  
14 allowed to thoroughly address the concerns of residents – concerns that mirrored those of  
15 residents in this proceeding. The Gilbert project was discussed at length during the hearing,  
16 as that project's final CEC featured numerous conditions agreed upon by community  
17 stakeholders to mitigate the plant's visual and noise impacts, as well as address concerns  
18 from nearby property owners regarding potentially diminished property values.<sup>56</sup>

19 Further, SRP entered into an intergovernmental agreement ("IGA") with the Town  
20 of Gilbert addressing and attempting to mitigate community concerns *before* it even filed  
21 the application in that docket.<sup>57</sup> In this case, SRP apparently did all its negotiating during  
22 a single break on the final day of the hearing. As such, the Committee attempted to adapt  
23 some of the Gilbert CEC's conditions for this CEC.<sup>58</sup>

24  
25  
26 <sup>53</sup> See Jordan Tr. Vol. V at 908:23-25; Jordan Tr. Vol. V at 933:5-6.

27 <sup>54</sup> Jordan Tr. Vol. V at 907:14-15.

28 <sup>55</sup> Petry Tr. Vol. IV at 636:13-15.

<sup>56</sup> Decision No. 63611.

<sup>57</sup> See Application in Docket No. L-00000B-00-0105.

<sup>58</sup> Little Tr. Vol. VII at 1399:6-12.



1 As Member Gentles observed, that task of trying to mitigate the numerous negative  
2 impacts this project will have on Randolph proved difficult given the vast time to prepare  
3 that was afforded to the Gilbert stakeholders that Randolph residents were denied. As he  
4 put it, “when you go back and look at the Gilbert CEC, they clearly had extensive  
5 conversations before they came to the CEC deliberation, on what they were willing to do.  
6 That is just not evident here in this condition.”<sup>59</sup>

7 As with all the negative impacts of this ill-advised project, we are fortunate that we  
8 do not simply have to accept this and that there are viable, safe, and reliable alternatives.

### 9 **C. Unnecessarily Rushed Process**

10 During the hearing it became clear that SRP failed to adhere to standard industry  
11 practice and its own internal regulations when it selected the CEP to meet its peaking  
12 capacity needs. As Sierra Club witness Robert Gramlich explained, the best way to secure  
13 new capacity is to begin by issuing a request for proposals (“RFP”).<sup>60</sup> This allows the utility  
14 to go through a process that defines its specific resource needs and allows developers to  
15 submit bids that meet those requirements, regardless of the generating technology used.<sup>61</sup>  
16 This process is considered a best practice because it allows the utility to see up-to-date  
17 information regarding the costs and benefits of using different generation technologies to  
18 serve its specific service territory.<sup>62</sup> As Mr. Gramlich described, this is particularly helpful  
19 because many renewable technologies, including solar and battery storage, have  
20 experienced dramatic price reductions recently.<sup>63</sup> Moreover, going through an RFP process  
21 simply allows the utility to consider a variety of options that it might never have considered  
22 otherwise.<sup>64</sup>

23 SRP fully understands the value of the RFP process. SRP’s Chief Power System  
24 Executive, John Coggins, agreed that RFPs are a useful means of comparing the prices of

25  
26 <sup>59</sup> Gentles Tr. Vol. VIII at 1428:16-19.

<sup>60</sup> Gramlich Tr. Vol. VII at 1128:19-23.

<sup>61</sup> Coggins Tr. Vol. I at 72:15-20.

<sup>62</sup> Gramlich Tr. Vol. VII at 1128:24 – 1129:3.

<sup>63</sup> Gramlich Tr. Vol. VII at 1128:24 – 1129:3.

<sup>64</sup> Gramlich Tr. Vol. VII at 1129:3-8.



1 different generation technologies.<sup>65</sup> In addition, like most utilities, SRP makes procurement  
2 decisions in accordance with its Integrated Resource Plan (“IRP”).<sup>66</sup> And critically, SRP’s  
3 2018 IRP specifies that the utility should go through an all-source RFP for new contracts  
4 for new-build generation.<sup>67</sup>

5 In this case, however, SRP never issued an RFP.<sup>68</sup> Indeed, despite the directive  
6 included in its IRP – the document intended to guide all SRP’s procurement decisions –  
7 SRP decided on the CEP without seeking bids for any other options *even though SRP*  
8 *testified that it had adequate time to conduct an all-source RFP.*<sup>69</sup> In fact, *after* the CEP  
9 was announced, SRP issued another RFP for 400 MW of capacity to come online *at the*  
10 *same time* as CEP in the summer of 2024.<sup>70</sup> As such, SRP could have easily issued an RFP,  
11 evaluated alternatives, and brought the needed capacity online in time, it just chose not to.  
12 Said differently, SRP had time to do an RFP, but chose not to even though it issued an RFP  
13 for other capacity with a similar due date as the CEP.

14 This failure to issue an RFP is only part of the oddly rushed process that resulted in  
15 the CEP. Mr. Coggins also testified that when some board members requested an additional  
16 month to evaluate the project, SRP management recommended that their request for more  
17 time be denied.<sup>71</sup> Accordingly, the board voted eight to six in favor of moving forward with  
18 the project, meaning that this project moved forward based on a single vote.<sup>72</sup>

#### 19 **D. Viable Alternatives are Available**

20 The record revealed that there are significantly better options for meeting SRP’s  
21 peaking capacity needs that would eliminate each and every one of the negative  
22 environmental, health and other impacts of the CEP. In fact, SRP’s consultant, E3, found  
23 that a smaller configuration of battery storage could easily replace the CEP while providing

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24 <sup>65</sup> Coggins Tr. Vol. I at 73:18 – 74:4.

25 <sup>66</sup> Coggins Tr. Vol. I at 73:2-17.

26 <sup>67</sup> Smedley Tr. Vol. II at 273:24 – 274:8.

27 <sup>68</sup> Coggins Tr. Vol. I at 83:7.

28 <sup>69</sup> Smedley Tr. Vol. II at 414:15-18.

<sup>70</sup> Smedley Tr. Vol. II at 413:21 – 414:3.

<sup>71</sup> Coggins Tr. Vol. I at 81:1-7.

<sup>72</sup> Coggins Tr. Vol. I at 83:13-22.

1 a higher effective load carrying capacity (“ELCC”). Witness Gramlich explained that  
2 according to the E3 study commissioned by SRP, SRP could install only 731 MW of  
3 battery capacity and those batteries would provide the same capacity value of the 820 MW  
4 CEP.<sup>73</sup>

5 Nonetheless, SRP set aside E3’s research and refused to even admit that viable  
6 alternatives exist, let alone consider them. Despite knowing that its own consultant had  
7 found that batteries could replace the CEP, SRP witness Smedley stated, “We have taken  
8 a serious look at alternatives, and our conclusion is that there are no other viable options to  
9 meet the significant near-term need that we have that would not introduce significantly  
10 higher reliability risk for our customers.”<sup>74</sup> This conclusion is belied by SRP’s own  
11 consultant’s study, a study that SRP attempted to keep from the public by initially declaring  
12 it confidential.<sup>75</sup>

13 SRP’s position on battery storage is unfounded for two reasons. First, SRP has  
14 extensive experience with solar and battery storage technology in its service territory, so it  
15 clearly believes in the technology – storage has several significant operational benefits that  
16 natural gas cannot provide. Second, with respect to reliability concerns, SRP must also  
17 consider the serious reliability problems that accompany natural gas generation.

18 SRP’s other arguments opposing battery storage are easily dismissed. SRP is  
19 already very familiar with the operation of battery storage and solar generation. Mr.  
20 Smedley testified that SRP currently operates 400 MW of utility-scale solar generation and  
21 will be adding 450 MW of battery storage to its system by summer of next year – in addition  
22 to the 50 MW of storage it operates today.<sup>76</sup> And as SRP witness Bond-Simpson explained,  
23 “battery storage paired with solar today is a great tool for us to decarbonize, and the way  
24 we do this is by maximizing the daily production.”<sup>77</sup>

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26 <sup>73</sup> Gramlich Tr. Vol. VII at 1120:25 – 1121:3.

27 <sup>74</sup> Smedley Tr. Vol. II at 346:25 – 347:4.

28 <sup>75</sup> Tr. Vol. II at 368:25 – 369:7.

<sup>76</sup> Smedley Tr. Vol. II at 272:21-24.

<sup>77</sup> Bond-Simpson Tr. Vol. II at 307:24 – 308:1.

1 Mr. Gramlich made this same observation, pointing out that the complementary  
2 nature of solar combined with storage allows for solar production to be maximized because  
3 that energy can be saved and used later.<sup>78</sup> That is not where the benefits end, however, as  
4 combined solar and storage systems can also alleviate issues related to excess midday solar  
5 output in ways that gas plants simply cannot. As he described, “A 100 MW battery is  
6 actually providing 200 MW of ramping, of moving power from one time to another. You  
7 can be fully charging the battery at 3 pm, and then at 6 pm, you can be fully discharging.  
8 So the net difference from negative 100 to positive 100 is 200.”<sup>79</sup> This means that the  
9 battery can provide a 200 MW range, while a gas plant with the same capacity can only go  
10 from 0 to 100 MW.<sup>80</sup>

11 In addition to offering greater range and a higher ELCC than the CEP, battery  
12 storage also can be sited in a modular fashion.<sup>81</sup> This means batteries can be deployed in  
13 multiple locations and in smaller quantities and still perform the same functions as a  
14 conventional gas peaker plant.<sup>82</sup> Batteries can also be interconnected across the distribution  
15 grid, which eliminates the need for a large, centralized generation plant like the CEP. This  
16 also means that storage can mitigate the need for transmission and distribution upgrades  
17 that are often needed to deliver power from centralized plants to customers.<sup>83</sup>

18 On the other hand, natural gas generation carries significant reliability risks that  
19 SRP did not address. Indeed, several major outages stemming from natural gas shortages  
20 have occurred in recent years, including large-scale well freeze offs that led to outages  
21 across large parts of the Electric Reliability Council of Texas (ERCOT) in Texas in  
22 February of 2021, and even more recently, a loss of supply from the El Paso Natural Gas  
23 Pipeline – which serves Arizona – on February 3, 2022 due to winter weather conditions.<sup>84</sup>  
24 Natural gas generation is susceptible to winter weather-related issues in other parts of the

25 <sup>78</sup> Gramlich Tr. Vol. VII at 1124:19-22.

26 <sup>79</sup> Gramlich Tr. Vol. VII at 1125:4-9.

27 <sup>80</sup> Gramlich Tr. Vol. VII at 1125:9-13.

28 <sup>81</sup> Gramlich Tr. Vol. VII at 1184:4-7.

<sup>82</sup> Gramlich Tr. Vol. VII at 1184:8-12.

<sup>83</sup> Gramlich Tr. Vol VII at 1184:21 – 1185:7.

<sup>84</sup> Ex.SC-34, Slide 17, Analysis of the Proposed Coolidge Expansion Project, Grid Strategies LLC.

1 country, and North American Electric Reliability Corporation (NERC) reporting confirms  
2 that during Winter Storm Uri – the same storm that lead to massive February 2021 outages  
3 in Texas – the vast majority of generation that went offline was natural gas, over 100 GW  
4 to be precise.<sup>85</sup> In fact SRP witness, Robert Olsen conceded that SRP had its gas supplies  
5 curtailed during winter storm Uri which demonstrates the real risks of natural gas supply.<sup>86</sup>

6 Lack of gas supply reliability poses a significant risk in Arizona, as there are no  
7 natural gas storage facilities in the state.<sup>87</sup> The CEP will be supplied by natural gas sourced  
8 from out-of-state shale basins through pipelines.<sup>88</sup> And as with any natural gas generator,  
9 it will rely on just-in-time delivery of gas to operate.<sup>89</sup> Essentially, SRP is proposing to  
10 expand a gas plant in a location that is already at very high risk for outages due to  
11 disruptions in pipeline systems.<sup>90</sup> In fact, a 2017 NERC analysis found that over 5,000 MW  
12 of Arizona gas generation is already at risk from pipeline-supply related disruption.<sup>91</sup> Yet  
13 despite these risks, SRP did not account for the risk of correlated gas outages in its analysis  
14 of the CEP.<sup>92</sup>

15 The evidence demonstrates that an economic comparison between batteries and gas  
16 combustion turbines (“CT”) like those being used in the CEP, favors batteries. Witness  
17 Gramlich’s analysis demonstrated, “[b]attery and gas CTs have comparable capital and  
18 O&M costs, but storage offers higher value and lower operating costs.”<sup>93</sup> In addition, gas  
19 CTs like the CEP are subject to “high and volatile fuel prices, while the fuel for renewables  
20 plus storage will always be free.”<sup>94</sup> An economic comparison between gas and batteries  
21 must also consider that “[b]atteries can arbitrage by charging at low prices and generating  
22 [discharging]m at high, particularly as higher renewable penetrations reduce off-peak

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23 <sup>85</sup> Ex SC-24, Slide 18.

24 <sup>86</sup> Olsen Tr. Vol. VII at 1283:10 – 1284:5

25 <sup>87</sup> Bond-Simpson Tr. Vol. II at 384:22-25.

26 <sup>88</sup> Smedley Tr. Vol. II at 266:11-16.

27 <sup>89</sup> Bond-Simpson Tr. Vol. II at 385:1-4.

28 <sup>90</sup> Ex SC-24, Slide 20.

<sup>91</sup> *Id.*

<sup>92</sup> Bond-Simpson Tr. Vol. II at 384:9-18.

<sup>93</sup> Ex SC 34, Slide 7.

<sup>94</sup> *Id.*

1 prices.”<sup>95</sup> Combining similar capital costs with the added benefits of arbitrage and  
2 protection against fuel price fluctuations reveals that batteries are the superior economic  
3 choice for SRP to meet its needs. This economic advantage is particularly important when  
4 considering the numerous health and environmental consequences of the CEP that should  
5 be avoided.

6 In sum, SRP failed to adequately consider alternatives to the CEP and even ignored  
7 its own consultant’s findings. This failure began with SRP’s rejection of the findings of its  
8 own consultant and continued through SRP intentionally ignoring the numerous  
9 advantages that battery storage provides over natural gas resources. It then extended to  
10 SRP’s unwillingness to recognize the serious reliability shortcomings of natural gas  
11 generation. Put simply, as Mr. Gramlich testified, “If SRP had fairly evaluated the  
12 alternatives, it would have found battery storage to be more cost effective and reliable than  
13 the Coolidge Expansion Project.”<sup>96</sup>

#### 14 **E. Deficient Application**

15 Under A.R.S. §40-360.02, a utility must file a plan that includes detailed technical  
16 information regarding the plant it would like to build with the Commission at least 90 days  
17 prior to filing an application for a CEC. These plans are an important prerequisite to filing  
18 a CEC because they provide the Commission with key information needed for transmission  
19 planning. As part of this plan, the applicant must submit a power flow and stability analysis  
20 that shows the effect that the new project will have on Arizona’s electric transmission  
21 system.<sup>97</sup>

22 In this case, however, no party could confirm that this power flow analysis was ever  
23 filed with the application, submitted to the Commission, made public, or otherwise seen by  
24 any party to this proceeding. Staff witness Andrew Smith was repeatedly asked if he knew  
25 whether the analysis was submitted and could not confirm that it had been. Finally, when  
26 asked directly, he hesitated and confessed he did not know, saying “Yes, I believe we were

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27 <sup>95</sup> *Id.*

28 <sup>96</sup> Gramlich Tr. Vol. VII at 1117:24 – 1118:2.

<sup>97</sup> A.R.S. §40-360.02(C)(7).

1 provided; however like I said before, I can't – I can't testify [ ] I think that's a better  
2 question for SRP.”<sup>98</sup>

3 Thus, the record indicates that SRP failed to submit this important transmission  
4 planning data to the Commission pursuant to A.R.S. §40-360.02 and that Staff did not  
5 review the data. Consequently, because SRP did not satisfy all of the statute's filing  
6 requirements, it failed to complete the plan prerequisite. This prerequisite is not optional –  
7 the statute mandates that “Every person contemplating construction of any plant within the  
8 state *shall file a plan with the commission ninety days before* filing an application for a  
9 certificate of environmental compatibility.”<sup>99</sup> SRP did not complete this step, and therefore  
10 was barred from submitting its CEC application under Arizona law. Due to this glaring  
11 oversight, the application should have been denied from the outset of the proceeding.

### 12 **III. Conclusion**

13 The Commission cannot allow the proposed expansion of Coolidge Generating  
14 Station to go forward. As described herein, the project would result in incredible harm to  
15 human health, contribute to climate change, create noise and light pollution, and consume  
16 scarce water resources. Its location is alarmingly close to a historic Black community and  
17 home for disabled adults. And in this case, SRP failed to carefully evaluate alternatives that  
18 would alleviate the numerous problems with this project and is instead counting on the  
19 Commission to overlook the flawed process that led to its application.

20 In considering how to rule on this review under A.R.S. §40-360.07(B), the  
21 Commission, “shall balance, in the broad public interest, the need for an adequate,  
22 economical and reliable supply of electric power with the desire to minimize the effect  
23 thereof on the environment and ecology of this state.” The evidence clearly and  
24 unequivocally demonstrates the numerous environmental and ecological damages the CEP  
25 will cause to the state. From dirty air, diminished water supplies and substantial human  
26  
27

28 <sup>98</sup> Smith Tr. Vol. VIII at 1361:8-15.

<sup>99</sup> A.R.S. §40-360.02(B)(emphasis added.)



1 health impacts to significant noise and light pollution, the record is clear that these  
2 outcomes will flow from the CEP.

3 In order to complete its review of the CEC, the Commission is tasked with balancing  
4 these substantial impacts on the environment and ecology of the state with the need for  
5 adequate, economical, and reliable electricity. In this case, the evidence clearly shows that  
6 batteries can provide this same adequate, economical, and even more reliable supply of  
7 electricity to the state while avoiding each and everyone of the negative impacts of the  
8 CEP. This balancing test can only lead to one conclusion: that the CEP must be denied.  
9 Therefore, Sierra Club submits because the Power Plant and Line Siting Committee did  
10 not adequately consider the compatibility factors included under A.R.S. §40-360.06(A),  
11 and the balancing test the Commission is required to perform under A.R.S. §40-360.07(B)  
12 favors denial of the CEP, it is now incumbent on the Commission to deny this CEC.

13  
14 **RESPECTFULLY SUBMITTED** this 14<sup>th</sup> day of March, 2022.

15  
16 **ROSE LAW GROUP pc**

17 /s/ Court S. Rich  
18 Court S. Rich  
19 Eric A. Hill  
20 Attorneys for Sierra Club  
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1 **Original plus 25 copies filed on**  
2 **this 14<sup>th</sup> day of March, 2022 with:**

3 Docket Control  
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5 1200 W. Washington Street  
6 Phoenix, Arizona 85007

7 *I hereby certify that I have this day served a copy of the foregoing document on all parties of*  
8 *record in this proceeding by regular or electronic mail to:*

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